Claims

[1] A process for producing a poly(phenylene ether) resin composition comprising (A) a poly(phenylene ether) and (B) a styrene resin, the styrene resin (B) being a styrene resin which comprises at least a rubber-modified polystyrene containing a polybutadiene having 90% or higher cis-1,4 bonds,

the process comprising:

a first step of melt-kneading the poly(phenylene ether) (A) and a first styrene resin to thereby obtain a melt-kneading product, wherein the first styrene resin is a styrene resin at least 80% by weight of which is (B1) a rubber-modified polystyrene containing a hydrogenated polybutadiene and/or a styrene homopolymer; and

a second step of melt-kneading the melt-kneading product with a second styrene resin, wherein the second styrene resin comprises (B2) a rubber-modified polystyrene containing a polybutadiene having 90% or higher cis-1,4 bonds.

[2] The process for producing a poly(phenylene ether) resin composition of claim 1, wherein the polystyrene (B1) comprises a rubber-modified polystyrene

containing a partially hydrogenated polybutadiene in which 5-70% of all double bonds have been hydrogenated.

[3] The process for producing a poly(phenylene ether) resin composition of claim 2, wherein the second styrene resin further contains a styrene homopolymer.

[4] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 3, wherein (C) a phosphorus flame retardant is further added in the first step in an amount of 1-80 parts by weight per 100 parts by weight of the sum of the poly(phenylene ether) (A) and the first styrene resin.

[5] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 4, wherein (C) a phosphorus flame retardant and/or other additive(s) are further added in the second step.

[6] The process for producing a poly(phenylene ether) resin composition of claim 4 or 5, wherein a phosphazene compound is used as the phosphorus flame retardant (C).

[7] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 6, wherein a polyolefin polymer is further added in the second step in an amount of 0.1-5 parts by weight.

[8] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 7, wherein a hydrogenated block copolymer derived from a block copolymer having at least one polymer block mainly comprising a vinylaromatic hydrocarbon and at least one polymer block mainly comprising a conjugated diene compound is further added in the second step in an amount of 0.1-15 parts by weight.

[9] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 7, wherein a hydrogenated block copolymer is further added in the second step in an amount of 0.1-15 parts by weight, the hydrogenated block copolymer being one which has been derived from a block copolymer having at least one polymer block mainly comprising a vinylaromatic hydrocarbon and at least one polymer block mainly comprising a conjugated diene compound and in which

(a) the amount of vinyl bonds derived from the conjugated diene compounds in the unhydrogenated block copolymer is 10-70%,

(b) the overall degree of hydrogenation of the unsaturated double bonds derived from the conjugated diene compounds is 60-85%, and

(c) the content of monomer units derived from the vinylaromatic hydrocarbons in the unhydrogenated block copolymer is 20-60% by weight.

[10] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 9, wherein intermediate material pellets are produced after the melt kneading in the first step, and the intermediate material pellets are subjected to the melt kneading in the second step.

[11] The process for producing a poly(phenylene ether) resin composition of any one of claims 1 to 10, wherein a phosphorus compound antioxidant is added in the second step.

[12] The process for producing a poly(phenylene ether) resin composition of claim 11, wherein the

phosphorus compound antioxidant to be added in the second step is a pentaerythritol diphosphite derivative.

[13] The process for producing a poly(phenylene ether) resin composition of claim 11, wherein the phosphorus compound antioxidant to be added in the second step is bis(2,6-di-t-butyl-4-methylphenyl) pentaerythritol diphosphite.

[14] A poly(phenylene ether) resin composition obtained by the process of any one of claims 1 to 13.

[15] The poly(phenylene ether) resin composition of claim 14, which has a glass transition temperature of -85°C or lower, the glass transition temperature being attributable to the polybutadiene having 90% or higher cis-1,4 bonds.

[16] An exterior part for a large television receiver and large copier, the exterior part comprising the poly(phenylene ether) resin composition of claim 14 or 15.